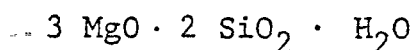


ASBESTOS MANAGEMENT

1. ASBESTOS - WHAT IS IT?

1.1. DEFINITION: A GENERIC TERM THAT APPLIES TO A GROUP OF NATURALLY OCCURRING, HYDRATED MINERAL SILICATES THAT ARE SEPERABLE INTO FIBERS. THE MOST COMMON IN THE U.S. IS CALLED CHRYSOTILE WHICH HAS THE FORMULA:



1.2. HEALTH HAZARDS

1.2.1. ASBESTOSIS - ABNORMAL FORMATION OF FIBROUS TISSUE IN THE LUNG (FIBROSIS).

1.2.2. BROCHIOGENIC CARCINOMA - CANCER OF THE BRONCHI.*

1.2.3. GASTRO-INTESTINAL CARCINOMA - CANCER OF THE DIGESTIVE TRACT.

1.2.4. MESOTHELIOMA - CANCEROUS TUMOR.

* CIGARETTE SMOKING IS A STRONGLY IMPLICATED CO-CARCINOGEN WITH ASBESTOS.

2. THE ASBESTOS STANDARD

2.1. OSHA - 29 CFR 1910.1001 AND 29 CFR 1926.58

2.1.1. SCOPE - THE TWO STANDARDS COVER ALL OCCUPATIONAL EXPOSURES TO ASBESTOS.

2.1.2. PERMISSIBLE EXPOSURE LIMITS (PEL)

-0.2 FIBERS/CC 8-HOUR TWA-

-0.1 FIBERS/CC 8-HOUR TWA--ACTION LEVEL-

2.1.3. PERSONAL MONITORING REQUIREMENTS

- INITIALLY
- PERIODICALLY (DAILY)
- ANY CHANGE IN PRODUCTION, PROCESS, PERSONNEL,
CONTROL EQUIPMENT, OR WORK PRACTICES.

2.1.4. EMPLOYEE NOTIFICATION OF MONITORING RESULTS

- WITHIN 15 DAYS OF RECEIPT OF RESULTS.

2.1.5. COMPLIANCE CONTROL METHODS

- ENGINEERING CONTROLS
 - *WET METHODS
 - *HEPA FILTER VACUUM
 - *ENCAPSULATION
- EMPLOYEE ROTATION IS NOT AN ACCEPTABLE MEANS
OF COMPLIANCE!
- RESPIRATORY PROTECTION MUST BE PROVIDED
 - *MUST PROVIDE A POWERED AIR-PURIFYING (PAPR)
RESPIRATOR IF THE EMPLOYEE WISHES.

2.1.6. MEDICAL EXAMINATIONS MUST BE PROVIDED

- PREPLACEMENT
- PERIODIC - ANNUALLY
- TERMINATION *all employees*

2.1.7. OTHER APPROPRIATE WORK CLOTHING MUST BE PROVIDED

- COVERALLS
- GLOVES, HEAD & FOOT COVERINGS
- FACE SHIELDS, GOGGLES, HARD HATS, ETC.

2.1.8. DECONTAMINATION FACILITIES (SEPARATE)

- SHOWERS
- DOUBLE LOCKERS

2.1.9. HAZARD COMMUNICATION REQUIREMENTS

- WARNING SIGNS, BARRICADES, LABELS
- MATERIAL SAFETY DATA SHEETS (MSDS)
- TRAINING

2.1.10. RECORDKEEPING REQUIREMENTS

- MAINTAIN MEDICAL RECORDS FOR 30 YEARS AFTER EMPLOYEE TERMINATION
- MAINTAIN TRAINING RECORDS FOR ONE YEAR AFTER EMPLOYEE TERMINATION.

2.1.11. HOUSEKEEPING REQUIREMENTS

- USE WET METHODS
- USE HEPA VACUUM CLEANER
- DRY SHOVELING, SWEEPING, ETC. IS ACCEPTABLE ONLY IF THE ABOVE PROVE INFEASIBLE.
- ALL WASTE MUST BE PLACED IN SEALED, PROPERLY LABELLED CONTAINERS

3. EFFECTIVE DATES OF THE STANDARD

- 10/20/86- COMPLETE INITIAL EXPOSURE MONITORING
- 11/17/86- ESTABLISH REGULATED AREAS
- 1/16/87- PROVIDE POWERED AIR RESPIRATORS
- 10/20/86- EMPLOYEE TRAINING
- 11/17/86- INSTITUTE MEDICAL SURVEILLANCE
- 7/20/87- INSTITUTE WRITTEN COMPLIANCE PROGRAM
- 7/20/88- IMPLEMENT ENGINEERING/WORK PRACTICE CONTROLS

4. KOCH REFINING COMPANY ASBESTOS COMPLIANCE PROGRAM

*UNDER DEVELOPMENT.